
EXHIBIT A

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

CYWEE GROUP LTD.,

Plaintiff

v.

**SAMSUNG ELECTRONICS CO. LTD.
AND SAMSUNG ELECTRONICS
AMERICA, INC.,**

Defendants.

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NO. 2:17-CV-00140-RWS-RSP

PLAINTIFF’S FIRST SET OF INTERROGATORIES TO SAMSUNG

TO: Defendants Samsung Electronics Co. Ltd. and Samsung Electronics America, Inc., by and through its attorneys of record, Christopher Kennerly & Elizabeth Brann of PAUL HASTINGS LLP and Melissa Smith of GILLAM & SMITH, LLP:

Under Rule 26 and 33 of the Federal Rules of Civil Procedure, Cywee Group Ltd.

(“Cywee”) requests that Defendants Samsung Electronics Co. Ltd. and Samsung Electronics America, Inc. (collectively “Samsung”) fully answer the following interrogatories in writing and under oath, unless objected to, in which event Samsung shall state the specific reasons for the objection (including any evidentiary or procedural rules upon which each objection is based) and then answer to the full extent any portion of or to the extent the interrogatory is not objectionable. Samsung’s answers and objections shall be served upon Cywee within thirty (30) days following the service of these interrogatories.

I. DEFINITIONS

1. The term “**Accused Products**” collectively refers to the Galaxy S6, Galaxy S6 Edge, Galaxy S6 Edge+, Galaxy S6 Active, Galaxy S7, Galaxy S7 Edge, Galaxy S7 Active, Galaxy Note5, Galaxy Tab S2 8.0, Galaxy Tab S2 9.7, Galaxy Note 7, Galaxy Tab S3 9.7, Galaxy J3 Emerge, Galaxy S8, and Galaxy S8+.

2. The term “**Additional Products**” collectively refers to all Samsung mobile phones and tablets sold in the United States from 2010 through the present that are not Accused Products.

3. The term “**Identify**” means for persons their name, address, phone number, email address, present employer (name, address, telephone number), their employer at the time relevant to the Interrogatory response and any other information sufficient to allow them to be identified and contacted for the purposes of issuing a subpoena or locating them for an interview.

4. The term “**Identify**” means for a non-person entity, the name, address, telephone number, email address and the Identify of the person at the entity whom Samsung contends or believes would have the most knowledge of the topics of the Interrogatory (as an example, the purchasing decision maker for an entity buying an Accused Product).

5. “**Identify**” means for any tangible thing or evidence a description of the tangible object, and if a Document, the Identity of the author, date of creation for each version, the Identity of the persons who were the intended audience, the device for which it was designed to be incorporated (*e.g.* software) and its content. In lieu of the information above, You may produce a tangible thing or a copy of such Document or written material with a reference to the Interrogatory to which it is responsive.

6. “**Identify**” means for Databases and Programs the vendor, name, server locations for databases, means of access, ability to add, delete or alter data, and the Documents that serve to instruct users and administrators on the programming, use, modification, security measures and maintenance of the system. For example: “SAP . . . accessible via the internet remotely or by company VPN or intranet with a user name and password. Each user is assigned privileges by an administrator which can vary between users and types of data from “read only” to the

ability to add and delete data. The SAP . . . allows users access to reports and queries. Servers housing the data are located in Instructions and manuals for use of the system are available by . . . “

7. The term “**Document**” means any written, graphic, electronic, or other medium that conveys information to a natural person or machine reader.

8. The term “**Databases and Programs**” shall mean all databases and computer accessible programs that record, track, store, retrieve, format and report data related to Accused Products’ design, manufacture, distribution, sale, importation and Financial Information.

9. The term “**Cywee**” means Cywee Group Ltd.

10. The term “**License Agreement**” means any agreement (past and present) that includes a license, covenant not to sue or release for the infringement of any patent or other rights to use, make, sell, offer to sell or import Accused Products or Additional Products in the United States, including those where the granted rights include additional jurisdictions.

11. The term “**Motion Sensor**” means any sensor for detecting motion, rotation, rate, acceleration, magnetic fields, and/or a device’s orientation. For clarity, this term includes magnetometers, gyroscopes, and accelerometers.

12. The term “**Motion Sensing**” means the ability to detect, and use, movement, rotations or rotation rate, acceleration, magnetic fields, and/or a device’s orientation. Motion Sensing includes the usage of one or more Motion Sensors, and processing of data received from said sensors.

13. The term “**Patents-in-Suit**” means U.S. Patents 8,441,438 and 8,552,978.

14. The term “**’438 Patent**” means U.S. Patent 8,441,438.

15. The term “**’978 Patent**” means U.S. Patent 8,552,978.

16. The term “**Orientation Sensing**” means the ability to detect, and use, attitude or orientation changes (measured by, e.g., the roll, pitch, and yaw angles) of a sensor or device.

17. The terms “**Samsung**,” “**You**,” and “**Your**,” means Samsung Electronics Co. Ltd. and Samsung Electronics America, Inc. and all of their predecessor or successor corporations, companies, or other business entities, its representatives, agents, insurers, attorneys, employees, directors, officers, parent companies, subsidiaries, affiliates, and all others over whom Samsung has control.

18. The term “**Financial Information**” includes sales revenue, average per unit price, profits, gross margins, net income, costs of goods sold, commissions, returns, royalties paid per unit, unit sales and EBITA broken down for each year.

19. The term “**Supplier**” shall mean the entity from whom You buy or procure, directly or indirectly through a contract manufacture a component as described in the interrogatories below.

20. All undefined terms should be interpreted using common sense and the Federal Rules of Civil Procedure. This means that words should generally be understood to have their ordinary English language meaning as used in common vernacular. If certain terms have specific or specialized meaning in Your industry that make sense in the context of the request, then that specialized meaning should be applied. If the Federal Rules of Civil Procedure provide a specific definition for a term, i.e. “document,” then that definition is controlling.

II. INTERROGATORIES

INTERROGATORY NO. 1: For each Accused Product, identify each ‘438 Patent claim element listed below that You allege is not present literally or under the doctrine of equivalents:

- i. obtaining a previous state of the six-axis motion sensor module

- ii. wherein the previous state includes an initial-value set associated with previous angular velocities gained from the motion sensor signals of the six-axis motion sensor module at a previous time $T-1$;
- iii. obtaining a current state of the six-axis motion sensor module by obtaining measured angular velocities ωx , ωy , ωz gained from the motion sensor signals of the six-axis motion sensor module at a current time T
- iv. obtaining a measured state of the six-axis motion sensor module by obtaining measured axial accelerations Ax , Ay , Az gained from the motion sensor signals of the six-axis motion sensor module at the current time T
- v. calculating predicted axial accelerations Ax' , Ay' , Az' based on the measured angular velocities ωx , ωy , ωz of the current state of the six-axis motion sensor module without using any derivatives of the measured angular velocities ωx , ωy , ωz
- vi. said current state of the six-axis motion sensor module is a second quaternion with respect to said current time T
- vii. comparing the second quaternion in relation to the measured angular velocities ωx , ωy , ωz of the current state at current time T with the measured axial accelerations Ax , Ay , Az and the predicted axial accelerations Ax' , Ay' , Az' also at current time T
- viii. obtaining an updated state of the six-axis motion sensor module by comparing the current state with the measured state of the six-axis motion sensor module
- ix. calculating and converting the updated state of the six axis motion sensor module to said resulting deviation comprising said resultant angles in said spatial pointer reference frame of the 3D pointing device

RESPONSE:

INTERROGATORY NO. 2: For each '438 Patent claim element You identified in Interrogatory No. 1 as not present in any Accused Product, Identify all Documents that you intend to use at trial to demonstrate the absence of such claim element.

RESPONSE:

INTERROGATORY NO. 3: Identify the Persons You contend invented all or an identifiable part of the technology disclosed in the '438 Patent to the extent that technology is used in the Accused Products.

RESPONSE:

INTERROGATORY NO. 4: For each Accused Product, identify each '978 Patent claim element listed below that You allege is not practiced and not capable of being practiced:

- i. generating an orientation output associated with an orientation of the 3D pointing device associated with three coordinate axes of a global reference frame associated with Earth
- ii. generating a first signal set comprising axial accelerations associated with movements and rotations of the 3D pointing device in the spatial reference frame;
- iii. generating a second signal set associated with Earth's magnetism

- iv. generating the orientation output based on the first signal set, the second signal set and the rotation output or based on the first signal set and the second signal set
- v. generating a rotation output associated with a rotation of the 3D pointing device associated with three coordinate axes of a spatial reference frame associated with the 3D pointing device
- vi. using the orientation output and the rotation output to generate a transformed output associated with a fixed reference frame associated with a display device
- vii. wherein the orientation output and the rotation output is generated by a nine-axis motion sensor module
- viii. obtaining one or more resultant deviation including a plurality of deviation angles using a plurality of measured magnetisms M_x , M_y , M_z and a plurality of predicted magnetism M_x' , M_y' and M_z' for the second signal set
- ix. wherein the transformed output represents a segment of a movement in a plane in the fixed reference frame parallel to a screen of the display device
- x. wherein the orientation output is a rotation matrix, a quaternion, a rotation vector, or comprises three orientation angles

RESPONSE:

INTERROGATORY NO. 5: For each '978 Patent claim element You identified in Interrogatory No. 4, Identify all Documents that You intend to use at trial to demonstrate the absence of such claim element.

RESPONSE:

INTERROGATORY NO. 6: Identify the Person You contend invented all or an identifiable part of the technology disclosed in the '978 Patent to the extent that technology is used in the Accused Products.

RESPONSE:

INTERROGATORY NO. 7: Identify the Person or people that You believe would have participated in the Hypothetical Negotiation on Your behalf. If more than one Person, also Identify the Person who would have been the decisionmaker.

RESPONSE:

INTERROGATORY NO. 8: For the Person identified in Your Response to Interrogatory No. 7, Identify every License Agreement they have participated in negotiating.

RESPONSE:

INTERROGATORY NO. 9: Identify any Documents related to Your policies, procedures, protocols, rules, guidelines or directives for license negotiations in effect at any time from January 2013 through the present.

RESPONSE:

INTERROGATORY NO. 10: Identify all of Your products in existence or development at the time of the Hypothetical Negotiation whose sales (both actual and projected) would have been considered by You during the Hypothetical Negotiation.

RESPONSE:

INTERROGATORY NO. 11: Identify all License Agreements.

RESPONSE:

INTERROGATORY NO. 12: Identify any non-infringing alternatives to the technology disclosed in the Patents-In-Suit You contend exist or have existed from 2010 through the present.

RESPONSE:

INTERROGATORY NO. 13: For each Accused Product specify which non-infringing alternatives it contains or could be modified to incorporate. Explain what modifications would be necessary to incorporate any non-infringing alternative.

RESPONSE:

INTERROGATORY NO. 14: Provide on an annualized basis all Financial Information for each Accused Product for every year from 2011 through the present.

RESPONSE:

INTERROGATORY NO. 15: Describe in detail all facts related to Your first awareness or knowledge of the Patents-in-Suit and of CyWee and what, if any, investigation You have undertaken with respect to either the Patent-in-Suit or CyWee, including but not limited to communications with third parties.

RESPONSE:

INTERROGATORY NO. 16: Describe the value You attribute to the Motion Sensing and Orientation Sensing capabilities in each of the Accused Products.

RESPONSE:

INTERROGATORY NO. 17: Identify all customer surveys, market research, or other Documents regarding consumer demand or feedback concerning Motion Sensing, Orientation Sensing, or both in mobile devices generally or in the Accused Products specifically.

RESPONSE:

INTERROGATORY NO. 18: Identify all customer surveys, market research, or other Documents that concerns the value consumers attribute to Motion Sensing, Orientation Sensing, or both in mobile devices generally or in the Accused Products specifically.

RESPONSE:

INTERROGATORY NO. 19: Identify all features of the Accused Products that You believe should be included in a conjoint study used to determine the value of the inventions claimed in the Patents-In-Suit.

RESPONSE:

INTERROGATORY NO. 20: Identify by part number and Supplier all Motion Sensors in the Accused Products.

RESPONSE:

INTERROGATORY NO. 21: Identify by part number and Supplier all processors in the Accused Products that send data to or receive data from a Motion Sensor in the Accused Products.

RESPONSE:

INTERROGATORY NO. 21: Identify by name and Supplier all software programs sold pre-loaded, or pre-programmed in the Accused Products that rely upon data from a Motion Sensor for their output or operation.

RESPONSE:

INTERROGATORY NO. 22: Identify all Your mobile phones and tablets sold since January 2013 that do not include a gyroscope.

RESPONSE:

INTERROGATORY NO. 23: Identify all Your mobile phones and tablets sold since January 2013 that do not include an accelerometer

RESPONSE:

INTERROGATORY NO. 24: Identify all Your mobile phones and tablets sold since January 2013 that do not include a magnetometer.

RESPONSE:

INTERROGATORY NO. 25: Identify any other entity who is a party to a joint defense agreement or similar agreement where You cooperate to defeat the claims brought herein by CyWee and provide the terms of such agreements. In lieu of a narrative answer, you may provide a copy of all versions of such joint defense (or similar) agreements.

RESPONSE:

INTERROGATORY NO. 26: For each Accused Product and Additional Product¹ from 2010 through the present provide the United States revenue and unit sales by year broken down by sales made by You versus sales made by AT&T, Verizon, T-Mobile, Sprint, U.S. Cellular, Boost Mobile, Cricket Wireless, MetroPCS, TracFone Wireless, Virgin Mobile USA, H2O Wireless, or any other similar U.S. wireless carrier. The answer should be provided in a format like the table below for each year:

	2010													
	Samsung		AT&T		Verizon		T-Mobile		Sprint		U.S. Cellular		Other Carriers	
Products	Units	Revenue	Units	Revenue	Units	Revenue	Units	Revenue	Units	Revenue	Units	Revenue	Units	Revenue
Galaxy S														
Galaxy SII														
Galaxy SIII														
Galaxy S4														
Galaxy S5														
Galaxy S6														
Galaxy S6 Edge														
Galaxy S6 Edge+														
Galaxy S6 Active														
Galaxy S7														
Galaxy S7 Edge														
Galaxy S7 Active														
Galaxy Note5														
Galaxy Tab S2 8.0														
Galaxy Tab S2 9.7														
Galaxy Note 7														
Galaxy Tab S3 9.7														
Galaxy J3 Emerge														
Galaxy S8														
Galaxy S8+														

RESPONSE:

INTERROGATORY NO. 27: Identify all individuals with knowledge of any matter that is discoverable in this case, information that would tend to prove or disprove any claims by CyWee. In addition to their identifying information, please provide a brief description of their discoverable knowledge.

RESPONSE:

INTERROGATORY NO. 28: Identify all individuals that supplied information used to answer any of these Interrogatories or assisted in the preparation of Your answers.

RESPONSE:

INTERROGATORY NO. 29: Identify Your Databases and Programs in existence since May 14, 2013.

RESPONSE:

¹ The sales of Additional Products are relevant to the hypothetical negotiation because they show sales of phones with and without gyroscopes and show consumer demand leading up to the hypothetical negotiation.

INTERROGATORY NO. 30: Provide all the demographic information You have for Your customers. This information should be provided separately for each Accused Product.

RESPONSE:

INTERROGATORY NO. 31: Identify all information in Your possession concerning consumer willingness-to-pay for individual smart phone features.

RESPONSE:

Date: August 11, 2017

Respectfully submitted,

/s/ Christopher L. Evans
Michael W. Shore (Texas 18294915)
Alfonso G. Chan (Texas 24012408)
Christopher Evans (Texas 24058901)
Ari B. Rafilson (Texas 24060456)
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Counsel for Plaintiff
CYWEE GROUP LTD.

CERTIFICATE OF SERVICE

The undersigned hereby certifies that all counsel of record who are deemed to have consented to electronic service are being served with a copy of this document via the Court's CM/ECF system on August 11, 2017.

/s/ Christopher L. Evans
Christopher L. Evans